All statewide longitudinal data system (SLDS) programs face the challenge of securing sufficient financial, human, and material resources to sustain their data systems over time and to enhance those systems to meet emerging data needs. Demonstrating the value of SLDS data through effective data use—including reports, data tools, and research—can be a powerful way to gain ongoing support for an SLDS.

This brief draws on the experiences of several state SLDS programs to identify common challenges to sustaining SLDSs as well as strategies for using data effectively to secure long-term support.

Challenges to SLDS Support

Over time, many factors can affect the successful continuation of an SLDS. Following are several common challenges that SLDS programs must address to sustain their systems.

Lack of sustainable funding
SLDSs might be built using federal grants or state budget appropriations that expire after initial objectives or deadlines are met. Without ongoing funding, SLDS programs cannot continue maintaining technical infrastructure and software licenses or pay agency staff members or contractors who work with the system. Even if funds are available to sustain current operations, SLDS programs might not be able to enhance their data collections, data systems, tools, and analysis to meet additional stakeholder needs. Changes in state and agency leadership can jeopardize state budget appropriations for the SLDS or grant opportunities depending on new leaders' priorities.

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Concern about data use
Public interests in the security of individuals' data—particularly for students and children—can lead to fears about data use and reluctance to support SLDS work. SLDS programs often are asked to document and defend their objectives and data management practices to address these concerns. Without strong data governance, it can be difficult to demonstrate that SLDS data are managed and used appropriately.

Lack of interest or buy in from stakeholders
Stakeholders might not be aware of the SLDS and its data tools or how to use them effectively. Without strong stakeholder engagement, SLDSs are not used and their value is unrealized. Additionally, state laws, agency regulations, and organizational cultures can make data sharing across agencies difficult and prevent useful data from being included in the SLDS.

Lack of sustainable infrastructure and practices
SLDSs that are built on overly complex or poorly planned systems and practices will be hard to sustain. Slow, inefficient data submission processes make it harder for data stewards to load data to the SLDS and can lead to outdated, incomplete, and poor

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quality data and tools. The absence of documented plans and standards for data sharing also can lead to inconsistent and erroneous data in the SLDS. SLDSs that are built solely to satisfy state and federal reporting requirements might not be able to respond to other stakeholder needs.

Changes to staff, leadership, and priorities
Turnover among state and agency leaders and staff members—whether following elections or due to regular job changes—can affect operations at the SLDS and engagement from its stakeholders. In addition to reconsidering SLDS funding, new leaders can shift agency priories away from SLDS work, redirect staff time, and decrease the use of SLDS data.

Data Use Strategies to Gain Support for an SLDS

The effective use of SLDS data can help mitigate challenges to SLDS support in a number of ways. The following strategies can help state SLDS programs plan data use projects to demonstrate the SLDS's value, engage stakeholders, and nurture support for the data system.

Identify opportunities to use SLDS data
Work with stakeholders to determine how the SLDS can support their interests and needs. In many states, the comprehensive, statewide data in an SLDS can be used to fulfill some or all of federal compliance data collections such as ED*Facts*, the Civil Rights Data Collection, Workforce Innovation and Opportunity Act, and Perkins Act. Generating and automating these data reports from the SLDS saves time and resources for the state and local education agency programs responsible for submitting them. SLDSs also can provide state government officials with data to support policy proposals and share frequently requested datasets with researchers and the public.

Additionally, SLDSs offer stakeholders new ways to measure and evaluate state policies and programs. SLDS data can provide more effective measures of student outcomes and characteristics that stakeholders need to understand, such as alternatives to free and reduced-price lunch eligibility as a measure of students' socioeconomic status. SLDS programs can collaborate with stakeholders to develop new metrics or analyze policy questions that will help plan and improve education and workforce programs.

Engage stakeholders
Stakeholders who are actively involved in SLDS work and who rely on the SLDS data and tools for their operations are more likely to advocate for or even invest their own resources in its continuation. Strong relationships throughout partner organizations also can help SLDS work continue in the face of leadership and personnel turnover.

Engaging stakeholders effectively requires strong, regular communications with SLDS partners about available data and plans for future work that supports their interests. Expanding SLDS data and data use into additional areas opens avenues for collaboration with new partners, such as state social services, juvenile justice, adult education, and workforce services programs.

Establish a research agenda and data request process
A research agenda is a formal statement of the policy questions and priorities that will guide research and evaluation efforts for a state or agency. The agenda ensures that projects undertaken with SLDS data are tied to statewide or agency-wide strategic goals and can inform policymaking and decisionmaking in critical areas. Developing a research agenda for the SLDS helps to involve

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Effective Data Uses: Maryland

Maryland has both K12 and P-20W+ (early childhood through workforce) SLDS programs. The K12 SLDS is managed by the Maryland State Department of Education (MSDE). The P-20W+ system is housed at the Maryland Longitudinal Data System (MLDS) Center, an independent state agency, and contains data from MSDE, the Maryland Higher Education Commission, the Maryland Department of Labor, Licensing, and Regulation, and the University of Maryland's School of Social Work and College of Education.

MSDE demonstrates the value of the K12 SLDS to its stakeholders by providing reports that support the daily work of the agency's program offices. Events like the MSDE Connections Summit further promote and inspire data use among internal and external education professionals. MSDE is developing a new internal reporting system with pregenerated reports for frequently requested data so that stakeholders can find information more quickly and easily.

The P-20W+ SLDS also supports stakeholders with data that meet its partner agencies' compliance reporting needs. MLDS Center representatives promote the data system to state legislative aids as a source for cross-agency statistics that can inform policy and legislation such as the More Jobs for Marylanders Act. The MLDS Center is also the data source for state-mandated reports examining topics like dual enrollment. It tracks the impact and visibility of its SLDS work through website analytics and citations in academic journals.

Effective Data Uses: Kansas

The Kansas State Department of Education (KSDE) maintains a federated SLDS known as Kansas Individual Data on Students (KIDS). KIDS contains data from K12 schools as well as the Kansas Board of Regents, Department of Labor, Department of Revenue, Department for Children and Families, and Department of Health and Environment.

KIDS supplies data required for federal compliance reporting, including Perkins Act and all ED*Facts* data submissions. Some federal reports, such as for the Perkins Act, require collaboration and data sharing between the Kansas Board of Regents and KSDE. KIDS also provides statewide accountability information such as graduation rates, chronic absenteeism, and attendance rates, and it fulfills data requests from the state legislature. As reporting needs change, KSDE incorporates additional data into KIDS from its partners and from external sources such as the National Student Clearinghouse.

Cross-agency data support projects like Postsecondary Success Rate, which predicts postsecondary outcomes for students 2 years after leaving high school based on risk factors. This calculation is shared with K12 school districts and has generated increased interest in the quality and use of KIDS data. Postsecondary information is available publicly via the Kansas Postsecondary Progress Report (see figure 1). Additionally, KIDS is supporting an ongoing statewide school redesign initiative with district-level reports on student performance.

Going forward, KSDE plans to modernize its data collection system to make receiving and integrating data from partner agencies easier and to allow staff members to undertake new data work and analysis. KSDE is implementing the Center for the Integration of IDEA Data's Generate tool to automate federal ED*Facts* reporting.
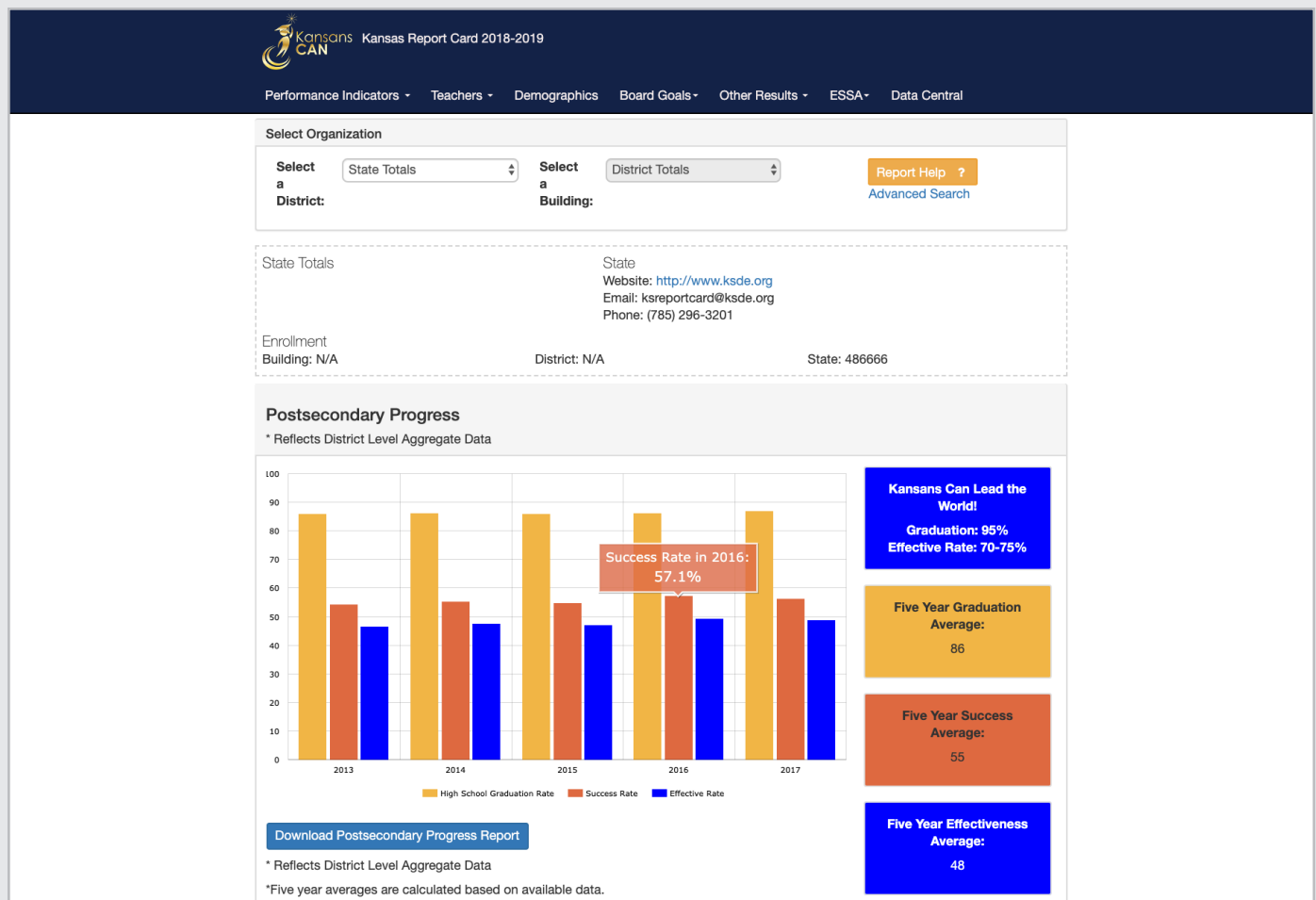

Figure 1. The Kansas Postsecondary Progress Report displays information about high school graduation rates and postsecondary enrollment, along with the state's Postsecondary Success Rate.

stakeholders in considering and documenting data use priorities that will support their needs.

A data request process or research request process makes SLDS data available to stakeholders through a formal, well-documented procedure. Data request processes help SLDS programs communicate to stakeholders what data are available and how they can be used, manage staff time efficiently when responding to requests, and evaluate the quality of proposed research before releasing SLDS data. Data requests can come from internal users at SLDS partner agencies or from external stakeholders, and they can range from simple counts to complex, multivariable datasets of anonymized student-level information. A research agenda can support a data request process by providing

criteria with which to evaluate and prioritize requests that will support the state or agency's policy interests.

Research agendas and data request processes provide ongoing value to a wide range of stakeholders long after the original SLDS grant priorities have been met and help support the need to sustain the data systems.

Use branding to build recognition

Stakeholders are more likely to see and appreciate the utility of SLDS data when they recognize reports and information that come from the SLDS. A strong branding strategy that connects frequently used data tools and reports to the SLDS helps make stakeholders more aware of the system.

Effective Data Uses: Alaska

The Alaska Education and Workforce Outcomes data system was created with a 2012 SLDS grant with data from the Alaska Commission on Postsecondary Education (ACPE), Alaska Department of Education and Early Development, University of Alaska, and Alaska Department of Labor and Workforce Development. Following the end of the federal grant, a statewide fiscal crisis challenged the sustainability of the Outcomes system.
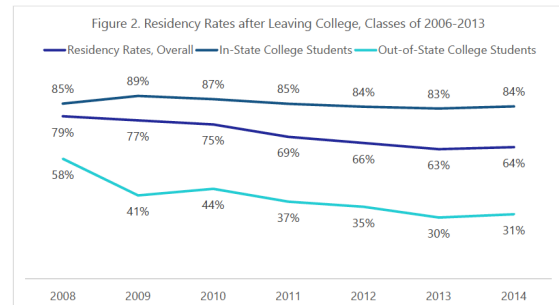
To re-engage partner agencies and help show state leaders the value of the SLDS in a constrained budget environment, ACPE, which manages the Outcomes system, coordinated a proof-of-concept research report showcasing data from the Outcomes system. Partner agency representatives worked together to select a topic and develop the analysis. The data system's governance structure facilitated the collaboration and gave all partners a deeper understanding of the data in the Outcomes system and how they could be used.

The resulting report, *Where Alaskans Go After Graduating from High School: Identifying Postsecondary Pathways*, traced postsecondary attendance, in-state or out-of-state enrollment, and post-college mobility for eight cohorts of Alaska high school graduates (see figure 2). Outcomes data partners expressed appreciation for the chance to contribute to the analysis and recognized the potential insights that cross-agency data could bring to additional policy questions. Data users saw a concrete example of how an SLDS can inform the allocation of limited state resources to programs that demonstrate desired outcomes affecting multiple sectors.

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Decision 3: Stay or Return to Alaska after Postsecondary Education
There was a slight decrease in Alaska residency rates the year after students left college (with or without a credential) for students in cohorts who left in 2010-2014 compared with those who left earlier. Figure 2 compares the residency rates for students who attended college the year after they left based on in-state or out-of-state enrollment decisions.[5] Residency is measured with a one-year delay after college to provide an opportunity for students to regain their PFD if their Alaska residency lapsed during their college years, especially for those students who attended college out-of-state.[6]

Figure 2. Residency Rates after Leaving College, Classes of 2006-2013
— Residency Rates, Overall — In-State College Students — Out-of-State College Students

	2008	2009	2010	2011	2012	2013	2014
Overall	85%	89%	87%	85%	84%	83%	84%
In-State	79%	77%	75%	69%	66%	63%	64%
Out-of-State	58%	41%	44%	37%	35%	30%	31%

Classes of 2006-2009
  Alaska Public High School Graduates: 30,669
  - 52% lived in Alaska during 2006-2014
  - 72% enrolled in postsecondary education
  - 69% (21,308) attended college
    - Out of those who attended college, 38% graduated with a credential by 2014.

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[5] 2007 PFD rates after students left college were excluded because the proportion represented few students (37 students), 62% of which were residents. Most students in the Classes of 2006-2013 were either still enrolled in high school or college during that time.
[6] Students attending college out-of-state may, and often do, maintain their Alaska residency.

Figure 2. The report undertaken with data from Alaska's Outcomes data system traces several pathways taken by Alaska high school graduates through postsecondary education and employment. Among the pathways explored in the report is the decision to remain in or return to Alaska after college.

Alaska is considering building a statewide enterprise data hub that would integrate data from all state agencies and could take on the cross-sector policy analysis for which the Outcomes system was designed. ACPE is supporting this new effort by providing details and code for its data matching process with state officials planning the data hub to help inform the initiative.

Effective Data Uses: South Dakota

The South Dakota Department of Education (DOE) manages a K12 SLDS called the South Dakota Student Teacher Accountability Reporting System (SD-STARS). In the absence of a P 20W+ SLDS, DOE handles requests for data about students' postsecondary and workforce outcomes on an ad hoc basis and sometimes with data from non-state sources such as the National Student Clearinghouse.

DOE encourages its district stakeholders to use SD-STARS by increasing the amount of data and level of interactivity available in secure, online reports. For example, prior to SD-STARS, the department emailed spreadsheets to districts with their accountability results. Now, the accountability report cards are hosted in the SD-STARS portal and available to district users. This approach has tripled the amount of accountability data available to district users, allowing educators to interact with data in new ways and to view student rosters. Stakeholders from outside DOE can request additional data from SD-STARS or any DOE program through DOE's data request process.

DOE also devotes significant effort to training district users on general data use knowledge and skills as well as specific SD-STARS reports and tools. The department offers videos, webinars, in-person training, and Report Data Interpretation Guides to help ensure that stakeholders know how to use SD-STARS's data tools and are not overwhelmed. Training is offered in partnership with the University of South Dakota so that participants can receive academic credit. District representatives regularly use SD-STARS data for decisionmaking and at data retreats.

A group of contractors known as STARS Certified Trainers work with districts to use additional data outside of SD-STARS. The STARS Certified Trainers also receive training on SD-STARS and, along with the STARS Advisory Group of district representatives, offer DOE feedback on the data system.

In the future, DOE plans to train district representatives as "power users" who can build and publish customized data reports for their districts using new reporting software. District users also can ask DOE to create new SD-STARS reports through an established report request, approval, and development process. The department will continue to respond to state and district stakeholders' requests for new SD-STARS reports and to internal and external analysts seeking data.

Keep data and tools current

Stakeholders cannot rely on data tools that contain outdated data or that are difficult to use. Tools and reports that are regularly used by stakeholders, such as public report cards and secured-access reports for school districts, should be regularly maintained and enhanced to provide more information and to help users easily access the system. When planning new tools or software applications, SLDS programs should consider how easily they can be used by stakeholders who may not work with data frequently.

SLDS programs also can explore new systems to streamline data collection and management processes and further support stakeholder work. Standards-based applications such as Generate, which helps to automate federal reporting with datasets aligned to the Common Education Data Standards, can reduce the time stakeholders spend on repeated tasks and make it easier to share and use data across programs and organizations.

Conclusion

To sustain their data systems, SLDS programs must make data use essential to stakeholders. They must consider how they and their stakeholders can use SLDS data to support program operations, streamline essential tasks, and gain new insight into programs and policies that can help students succeed. In the face of limited funding, unfamiliarity or apathy toward the SLDS, and changing personnel and priorities, effective uses of SLDS data reinforce the value of the SLDS and give stakeholders reasons to invest in its continuation.

Additional Resources

Alaska Commission on Postsecondary Education (ACPE)
https://acpesecure.alaska.gov/

Kansas Postsecondary Progress Report
https://ksreportcard.ksde.org/ccr.aspx?org_no=State&rptType=3

Kansas State Department of Education
https://www.ksde.org/

Maryland Longitudinal Data System Center
https://mldscenter.maryland.gov/

Maryland State Department of Education
http://marylandpublicschools.org/

Measuring and Documenting Return on Investment: SLDS Issue Brief
https://slds.grads360.org/#communities/pdc/documents/18420

SLDS Sustainability Toolkit
https://slds.grads360.org/#program/sustainability-toolkit

South Dakota Department of Education
https://doe.sd.gov/

Where Alaskans Go After Graduating from High School: ACPE Report
https://acpe.alaska.gov/Portals/3/OTHER/Pubs/Migration_Report_Outcomes_Database_Report_2018.pdf